

REMARKS

In response to the above-identified Office Action, Applicants amend the application and seek reconsideration thereof. In this response, Applicants amend claim 15. Applicants do not cancel or add any new claims. Accordingly, Claims 1-3, 5-6, 8, 10-12, 14-17 and 19-20 are pending.

I. Claims Rejected Under 35 U.S.C. §103(a)

A. Obvious over Matchett in view of Mukohzaka

The Examiner rejects claims 1-3, 6, 10-12, 15-17 and 20 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,229,764 issued to Matchett, et al. ("Matchett") in view of U.S. Patent No. 5,910,999 issued to Mukohzaka ("Mukohzaka"). Applicants respectfully traverse the rejection.

To establish a *prima facie* case of obviousness, the prior art references, when combined, must teach or suggest each of the claim elements. See MPEP § 2143. Applicants respectfully submit the combination of Matchett and Mukohzaka fails to teach or suggest each of the elements of claims 1-3, 6, 10-12, 15-17 and 20.

Regarding the rejection of claim 1, among other elements, claim 1 defines an apparatus for authenticating a user's identity comprising a data matcher to process biometric data from a data collector to authenticate a user's identity, wherein the data matcher includes:

a database to store a first identity reference for the user, and

a data compiler, coupled to the database, the data compiler to integrate samples of data collected by the data collector collected over time to create a second identity reference, and replace the first identity reference with the second identity reference to establish an updated first identity reference. Applicants respectfully submit the combination of Matchett and Mukohzaka fails to teach or suggest each of the elements of claim 1.

Matchett teaches "a system activating and analyzing the biometric data from a plurality of biometrically oriented personal identification devices at intermittent intervals selectively allows or

prevents continued use of a particular protected system or device by a particular individual.”

Matchett, Abstract. Matchett’s device includes the following steps:

1. The recording of a particular user’s relevant biometric characteristics and data.
2. The storage of such data for future reference.
3. The taking of new biometric data, corresponding to that taken at step (1) above, from a prospective user as he or she attempts to use a protected system or device.
4. The comparison of new biometric data to the user’s reference biometric data.
5. The acceptance or rejection of the user based upon the results of comparison.
6. The continuous (intermittent and/or unpredictable) repetition of steps 3, 4, and 5, so long as the protected system or device is in use.
7. The rejection of the user and shutdown of the system if at any time during use the user fails more than a prescribed number of comparison tests. Matchett, col. 4, line 58 through col. 5, line 9.

The Examiner alleges this section of Matchett teaches “updating of a first identity reference with a second identity reference.” Paper No. 6, page 2. Applicants strongly disagree.

Applicants respectfully submit the cited section of Matchett teaches a device which records a particular user’s relevant biometric characteristics and data (step 1) then stores this data for future reference (step 2). When the user attempts to use a protected system or device, the system or device takes a sample (step 3) and compares the new sample to the reference data (step 4). If the sample matches the stored reference, the user is permitted access to the device or system (step 5). While the device or system is in use, the system or device takes samples for continued acceptance of the user (step 6 – repeating steps 3, 4 and 5). If any sample does not match the reference data, the system or device shuts down (steps 5 and 7).

There is clearly no teaching or suggestion in this section that indicates that the reference data is updated. The reference data remains the reference data throughout the whole process of continued authentication of the user, as evidenced by the repetition of steps 3, 4 and 5 and not steps 1 and 2. Therefore, Applicants respectfully submit at least the elements of replacing the first

identity reference with a second identity reference to establish an updated first identity reference is not taught or suggest by the cited sections of Matchett. Moreover, in their review of Matchett in its entirety, Applicants have been unable to find any section of Matchett that teaches or suggests at least these elements.

In addition, the Examiner admits that Matchett fails to teach or suggest integrating samples of data over time to create a reference image. See Paper No. 6, page 2. Applicants, in their review of Matchett, likewise have been unable to discern any sections that teach or suggest at least these elements. The Examiner relies on Mukohzaka to cure the defects of Matchett, however, Applicants respectfully submit Mukohzaka fails to cure the defects of Matchett.

The Examiner characterizes Mukohzaka as showing a fingerprinting system that integrates several images into a combined reference filter for use in authenticating users and the integration of several images provides a more accurate reference. See Paper No 6, pages 2-3. In addition, the Examiner alleges Mukohzaka “discloses the integration of several fingerprint samples over time to create a reference image.” Paper No. 6, page 2 (citing Mukohzaka Col. 4, lines 33-62, Col. 8, lines 63 – Col. 9, line 7 and Col. 12, lines 41-48). Applicants have reviewed Mukohzaka and respectfully disagree with the Examiner’s characterization of the teachings of Mukohzaka.

Mukohzaka teaches “an individual identification apparatus for confirming identities of individuals by using a pattern recognition technique.” Mukohzaka, col. 1, lines 9-11. A reference pattern is picked up at a standard posture and recorded in the apparatus. See Mukohzaka, col, 1, lines 48-52. To confirm whether or not an arbitrary person or a person on file is using the apparatus, “the apparatus picks up a finger print of the arbitrary person and electronically calculates a correlation between the arbitrary individual’s fingerprint and a finger print of the specific individual previously recorded in the apparatus.” Mukohzaka, col. 3, lines 21-30. “The apparatus judges whether or not the arbitrary person and the specific person are the same individual based on the correlation.” Mukohzaka, col. 3, lines 30-32.

Mukohzaka, in Column 4, teaches a first fingerprint is picked up by a charge-coupled device camera to be stored in memory and used as a “reference fingerprint”. See lines 33-50. This

process of taking a fingerprint is repeated several times (in the given example, four times) with the person placing his/her finger in (four) different manners. See lines 51-54. “As a result, four **different** reference fingerprints A, B, C, and D are stored in the frame memory 5 for the same specific person.” Lines 54-56 (emphasis added). “Thus, a **plurality** of (four, in this example) reference fingerprints are stored for the single person in order to enhance flexibility of the apparatus 100 enough to allow for possible distortions or rotations of the target pattern on the FOP 3 during the recognition process as described later.” Lines 56-61 (emphasis added).

Applicants respectfully submit that Column 4, lines 33-62 do not teach or suggest integrating samples of data over time to create a reference image as the Examiner alleges. Rather, this section teaches a **plurality** (four, in the given example) of **different** (A, B, C, and D) reference fingerprints stored for future reference.

Thus, this section, like Matchett discussed above, fails to teach or suggest both integrating samples of biometric data over time to create a second identity reference and updating a first identity reference with a second identity reference. In addition, Mukohzaka fails to teach or suggest a first identity reference being replaced by a second identity reference.

Column 8, line 63 through Column 9, line 7 of Mukohzaka teaches that the reference fingerprints (A, B, C, and D) are superimposed on a reference filter to be used in an individual identification operation. This is to enable the individual identification device to not falsely judge a mismatch between the target fingerprint and the reference filter.

Applicants respectfully submit a first identity reference is not being updated with a second identity reference since, in the given example, references A, B, C, and D are merely being superimposed on a filter. Thus, they are not updated since they remain the same throughout the identification process. In addition, a reference image is not created since (as discussed below with reference to Column 12) a correlation calculation comparing the four reference fingerprints is used to determine recognition, not to create a new reference image. Moreover, this section clearly does not teach or suggest reference fingerprints A, B, C, and D being replaced since there is no affirmative statements to such an effect. Thus, this section also fails to teach or suggest updating of

a first identity reference with a second identity reference, integrating several fingerprint samples over time to create a reference image and a first identity reference being replaced by a second identity reference.

As suggested above, Column 12 teaches that the four reference fingerprints are electronically superimposed into a multiple filter and a correlation calculation is performed by the multiple filter for comparison of the sample to the references. Applicants respectfully submit this process of superimposition of fingerprints A, B, C, and D, and performing a correlation calculation is not the equivalent to updating a first identity reference with a second identity reference or integrating several fingerprint samples over time to create a reference image since superimposing merely overlaps the existing images and does not create a new image. Thus, none of the four fingerprints are updated, nor is a new reference created since superimposition keeps the four references intact and is merely a relative comparison of the reference fingerprints to the sample. In addition, there is no affirmative teaching or suggestion that any reference fingerprint is being replaced at any time.

Therefore, for the reasons discussed above, the combination of Matchett and Mukohzaka fails to teach or suggest each of the elements of claim 1. The failure of the combination of Matchett and Mukohzaka to teach or suggest each of the elements of claim 1 is fatal to the obviousness rejection. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 1.

Claims 3 and 6 depend from claim 1 and include all of the elements thereof. Therefore, claims 3 and 6 are not obvious over Matchett in view of Mukohzaka for at least the same reasons as claim 1. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 3 and 6.

Regarding the rejection of claim 10, Applicants respectfully submit claim 10 defines a method comprising storing a first identity reference and collected biometric data in a database, sampling collected biometric data over time, integrating samples of collected biometric data to create a second identity reference and replacing the first identity reference with the second identity reference to establish an updated first identity reference similar to claim 1. Therefore, Applicants respectfully submit the discussion above regarding the combination of Matchett and Mukohzaka

failing to teach of suggest at least integrating samples over time to create a reference image, updating a first identity reference with a second identity reference, and a first identity reference being replaced by a second identity reference is equally applicable to claim 10. Thus, claim 10 is not obvious over Matchett in view of Mukohzaka. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 10.

Claims 11 and 12 depend from claim 10 and include all of the elements thereof. Therefore, claims 11 and 12 are not obvious over Matchett in view of Mukohzaka for at least the same reasons as claim 10. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 11 and 12.

Regarding the rejection of claim 15, Applicants respectfully submit claim 15 defines a machine readable medium having embodied thereon instructions, which when executed by an electronic system, causing the electronic system to store a first identity reference and collected biometric data to a database, sample the collected biometric data over time, integrate the samples of collected biometric data to create a second identity reference and replace the first identity reference with the second identity reference to establish an updated first identity reference similar to claims 1 and 10 discussed above.

Therefore, Applicants respectfully submit the discussion above regarding the combination of Matchett and Mukohzaka failing to teach of suggest at least integrating samples over time to create a reference image, updating a first identity reference with a second identity reference, and a first identity reference being replaced by a second identity reference is equally applicable to claim 15. Thus, claim 15 is not obvious over Matchett in view of Mukohzaka. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 15.

Claims 16-17 and 20 depend from claim 15 and include all of the elements thereof. Therefore, claims 16-17 and 20 are not obvious over Matchett in view of Mukohzaka for at least the same reasons as claim 15. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 16-17 and 20.

B. Obvious over Matchett in view of Mukohzaka, and in further view of Bianco

The Examiner rejects claims 8 and 20 under 35 U.S.C. § 103(a) as being obvious over Matchett in view of Mukohzaka, and in further view of U.S. Patent No. 6,256,737 issued to Bianco, et al. ("Bianco"). Applicants respectfully traverse the rejection.

Regarding the rejection of claim 8, claim 8 depends from claim 1 and contains all of the limitations thereof. Therefore, Applicants respectfully submit that the discussion above regarding Matchett and Mukohzaka failing to teach or suggest at least integrating samples over time to create a reference image, updating a first identity reference with a second identity reference, and a first identity reference being replaced by a second identity reference in claim 1 is equally applicable to an obviousness rejection of claim 8. Thus, the combination of Matchett and Mukohzaka fails to teach or suggest each of the elements of claim 8.

The Examiner relies on Bianco to cure the defects of Matchett and Mukohzaka. The Examiner characterizes Bianco as disclosing a biometric authentication system geared toward enterprise networks that place user biometric data on a "biometric server" that stores the "collection of data required by the system to authenticate users". Paper No. 6, pages 4-5 (citing Bianco, col. 2, lines 57-58). The Examiner does not cite Bianco for teaching or suggesting integrating samples over time to create a reference image, updating a first identity reference with a second identity reference, and a first identity reference being replaced by a second identity reference.

In addition, Applicants in reviewing Bianco are unable to discern any sections of Bianco that teach or suggest at least these elements. Therefore, Bianco fails to cure the defects of Matchett and Mukohzaka. Thus, claim 8 is not obvious over Matchett in view Mukohzaka, and in further view of Bianco. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 8.

Regarding the rejection of claim 20, claim 20 depends from claim 15 and contains all of the elements thereof. In addition, as discussed above, claim 15 includes elements similar to claim 1. Therefore, the discussion above regarding the failure of the combination of Matchett, Mukohzaka and Bianco failing to teach or suggest each of the elements of claim 8 is equally applicable to claim

20. Therefore, Bianco fails to cure the defects of Matchett and Mukohzaka. Thus, claim 20 is not obvious over Matchett in view of Mukohzaka, and in further view of Bianco. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 20.

C. Obvious over Matchett in view of Mukohzaka, and in further view of Dalude

The Examiner rejects claims 5, 14 and 19 under 35 U.S.C. § 103(a) as being obvious over Matchett in view of Mukohzaka in further view of U.S. Patent No. 6,310,966 issued to Dalude ("Dalude"). Applicants respectfully traverse the rejection.

Regarding the rejection of claim 5, claim 5 depends from claim 1 and contains all of the limitations thereof. Therefore, Applicants respectfully submit that the discussion above regarding Matchett and Mukohzaka failing to teach or suggest at least integrating samples over time to create a reference image, updating a first identity reference with a second identity reference, and a first identity reference being replaced by a second identity reference in claim 1 is equally applicable claim 5. Thus, the combination of Matchett and Mukohzaka fails to teach or suggest each of the elements of claim 5.

The Examiner relies on Dalude to cure the defects of Matchett. The Examiner characterizes Dalude as teaching a system wherein biometric identity data in the form of a digital certificate is attached to user data. See Paper No. 6, Page 5. Applicants respectfully submit Dalude fails to cure the defects of Matchett. The Examiner does not cite Dalude for teaching or suggesting integrating samples over time to create a reference image, updating a first identity reference with a second identity reference, and a first identity reference being replaced by a second identity reference.

In addition, Applicants in reviewing Dalude are unable to discern any sections of Dalude that teach or suggest at least these elements. Therefore, Dalude fails to cure the defects of Matchett and Mukohzaka. Thus, claim 5 is not obvious over Matchett in view of Mukohzaka, and in further view of Dalude. Accordingly, Applicants respectfully request withdrawal of the rejection of claim 5.

Regarding the rejection of claims 14 and 19, these claims each depend from claims 10 and 15, respectively, and contain all of the elements thereof. Therefore, the discussion above regarding the combination of Matchett and Mukohzaka failing to teach or suggest each of the elements of

claims 10 and 15 is equally applicable to claims 14 and 19. Therefore, the combination of Matchett and Mukohzaka fails to teach or suggest each of the limitations of claims 14 and 19.

The Examiner relies on Dalude to cure the defects of Matchett and Mukohzaka. Applicants respectfully submit that claims 14 and 19 contain elements similar to claim 5 discussed above. Therefore, the discussion above regarding Dalude failing to cure the defects of Matchett and Mukohzaka is equally applicable to similar elements recited in claims 14 and 19. Therefore, Dalude fails to cure the defects of Matchett and Mukohzaka.

The failure of Dalude to cure the defects of Matchett and Mukohzaka is fatal to the rejection. Therefore, claims 14 and 19 are not obvious over Matchett in view of Mukohzaka and in further view of Dalude. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 14 and 19.

II. Note

Applicants amend claim 15 to clarify the claim. Applicants respectfully submit the amendments do not require a new search, raise new matter issues, or present additional claims. Accordingly, Applicants respectfully request entry of the amendments.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666. Questions regarding this matter should be directed to the undersigned at (310) 207-3800.

Respectfully submitted,

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Dated: 1/20, 2004

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